

# 6BQ7A

## Medium-Mu Twin Triode

### 9-PIN MINIATURE TYPE

For TV Tuners Using Direct-Coupled Cathode-Drive Circuits

#### GENERAL DATA

##### Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC) . . . . .	6.3	volts
Current . . . . .	0.4	amp

Direct Interelectrode Capacitances:<sup>a</sup>

	Unit No.1	Unit No.2	
Grid to plate . . . . .	1.2	1.2	$\mu\text{f}$
Grid to cathode, internal shield, and heater. . . . .	2.6	—	$\mu\text{f}$
Cathode to grid, internal shield, and heater. . . . .	—	5	$\mu\text{f}$
Plate to cathode, internal shield, and heater. . . . .	1.2	—	$\mu\text{f}$
Plate to grid, internal shield, and heater. . . . .	—	2.2	$\mu\text{f}$
Plate to cathode. . . . .	0.12	0.12	$\mu\text{f}$
Heater to cathode . . . . .	2.6	2.6	$\mu\text{f}$
Plate of unit No.1 to plate of unit No.2. . . . .	0.010 max.		$\mu\text{f}$
Plate of unit No.2 to plate and grid of unit No.1 . . . . .	0.024 max.		$\mu\text{f}$

##### Characteristics, Class A<sub>1</sub> Amplifier (Each Unit):

Plate Supply Voltage. . . . .	150	volts
Cathode Resistor. . . . .	220	ohms
Amplification Factor. . . . .	38	
Plate Resistance (Approx.). . . . .	5900	ohms
Transconductance. . . . .	6400	$\mu\text{mhos}$
Plate Current . . . . .	9	ma
Grid Voltage (Approx.) for plate $\mu\text{a} = 100$ . . . . .	-6.5	volts

##### Mechanical:

Operating Position. . . . .	Any
Maximum Overall Length. . . . .	2-3/16"
Maximum Seated Length . . . . .	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-9/16" $\pm$ 3/32"
Diameter. . . . .	0.750" to 0.875"
Dimensional Outline . . . . .	See <i>General Section</i>
Bulb. . . . .	T6-1/2
Base. . . . .	Small-Button Noval 9-Pin (JEDEC No.E9-1)

← Indicates a change.



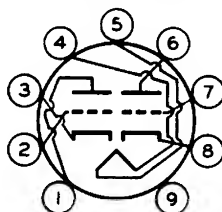
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DATA 1  
1-62

# 6BQ7A

Basing Designation for BOTTOM VIEW. . . . . 9AJ

Pin 1 - Plate of  
Unit No.2  
Pin 2 - Grid of  
Unit No.2  
Pin 3 - Cathode of  
Unit No.2  
Pin 4 - Heater  
Pin 5 - Heater



Pin 6 - Plate of  
Unit No.1  
Pin 7 - Grid of  
Unit No.1  
Pin 8 - Cathode of  
Unit No.1  
Pin 9 - Internal  
Shield

## AMPLIFIER — Class A<sub>1</sub>

*Values are for Each Unit*

### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE . . . . . 250<sup>b</sup> max. volts  
PLATE DISSIPATION . . . . . 2 max. watts  
CATHODE CURRENT . . . . . 20 max. ma

### → PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . 200<sup>b</sup> max. volts  
Heater positive with respect to cathode. . 200<sup>c</sup> max. volts

### Maximum Circuit Values:

Grid-Circuit Resistance . . . . . 0.5 max. megohm

<sup>a</sup> With external shield JEDEC No.315 connected to internal shield.

<sup>b</sup> Under cutoff conditions in direct-coupled cathode-drive circuits, it is permissible for this voltage to be as high as 300 volts.

<sup>c</sup> The dc component must not exceed 100 volts.

→ Indicates a change.

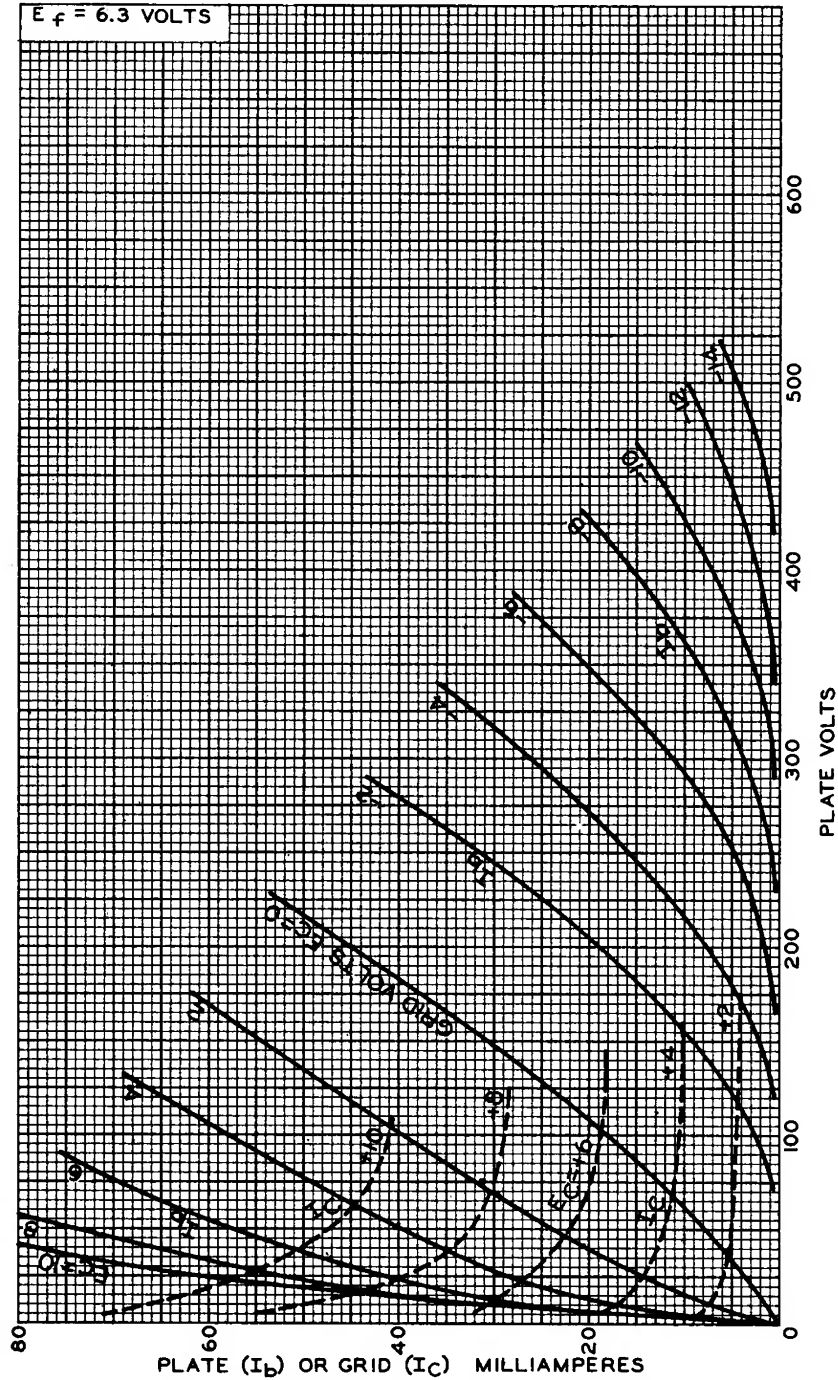
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## AVERAGE CHARACTERISTICS Each Unit



92CM-7536R1

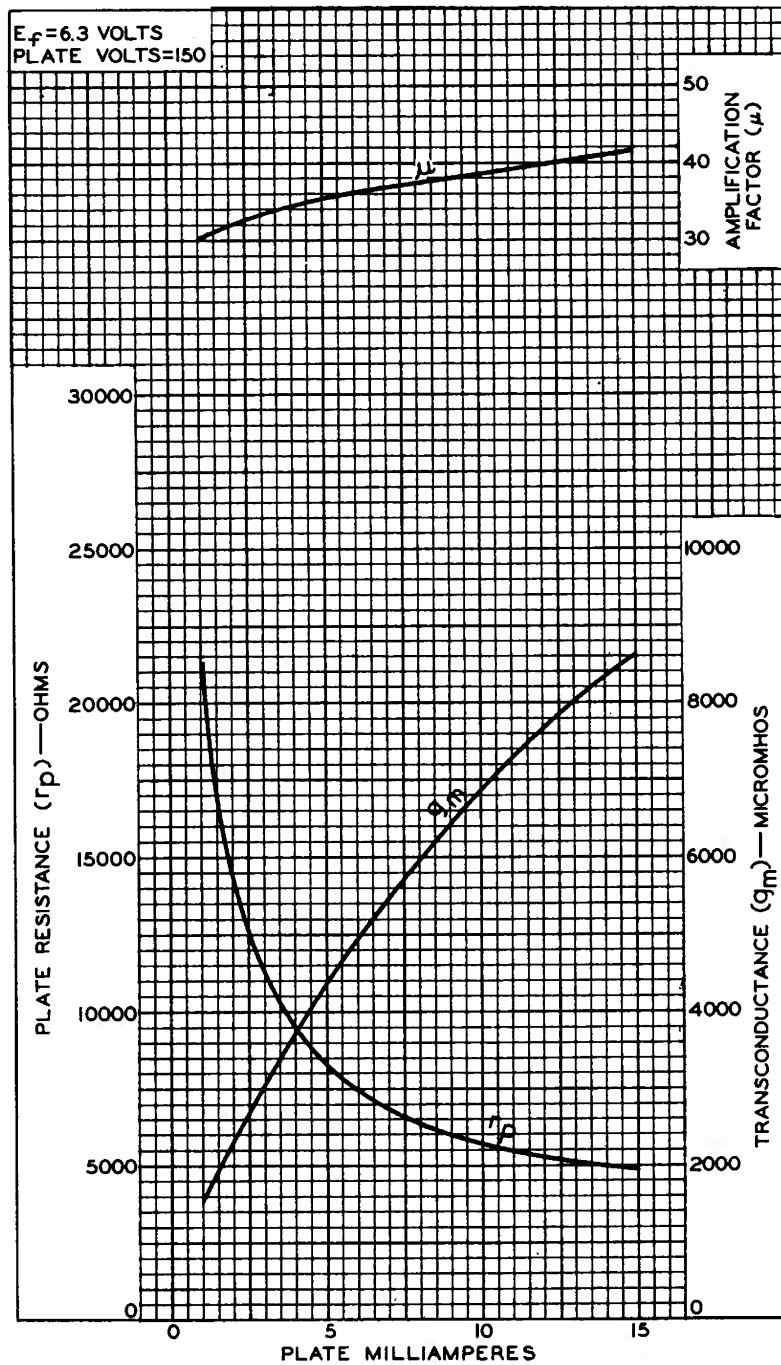


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DATA 2  
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## AVERAGE CHARACTERISTICS Each Unit



92CM-7538R2

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